

PTO FORM 4/92

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION DISCLOSURE
STATEMENT
GROUP:

ATTY DOCKET: 19789-8
SERIAL NO.: 10/031,731
APPLICANT(S): Wim J. van Ooij, et al.
FILING DATE: January 22, 2002

FOR: Acyloxy Silane Treatments for Metals
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| Exam. Init. | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS |
|-------------|-----------------|----------|--------------------|-------|-----------|
| SLC | 2 7 5 1 3 1 4 | 11/03/54 | Keil | | |
| | 3 0 2 2 1 9 6 | 12/04/57 | Jenkins et al. | | |
| | 3 2 4 6 6 7 1 | 04/19/66 | Stein et al. | | |
| | 3 4 7 6 8 2 6 | 11/04/69 | Millen | | |
| | 3 8 1 6 1 5 2 | 06/11/74 | Yates | | |
| | 3 8 4 2 1 1 1 | 10/15/74 | Meyer-Simon et al. | | |
| | 3 8 7 3 3 3 4 | 03/25/75 | Lee et al. | | |
| | 3 8 7 9 2 0 6 | 04/22/75 | Nestler et al. | | |
| | 3 9 6 0 8 0 0 | 06/01/76 | Kohl, Jr. | | |
| | 4 0 0 0 3 4 7 | 12/28/76 | Ranney et al. | | |
| | 4 0 1 5 0 4 4 | 03/29/77 | Ranney et al. | | |
| | 4 0 5 9 4 7 3 | 11/22/77 | Okami | | |
| | 4 0 6 4 3 1 3 | 12/20/77 | Takiguchi et al. | | |
| | 4 1 5 1 1 5 7 | 04/24/79 | Williams et al. | | |
| SL | 4 1 5 2 3 4 7 | 05/01/79 | Pletka et al. | | |
| | 4 1 7 9 5 3 7 | 12/18/79 | Rykowski | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS |
|------------------|----------|---------|-------|-----------|
| 2 1 1 0 4 6 1 | 07/26/94 | Canada | | |
| 0 4 3 5 7 8 1 A2 | 07/03/91 | EPO | | |
| 0 5 3 3 6 0 6 A1 | 03/24/93 | EPO | | |
| 0 5 7 9 2 5 3 B1 | 0/19/94 | EPO | | |

OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

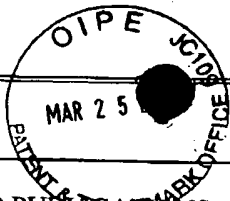
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| ✓ | Buchwalter, L.P., et al. Adhesion of polyimides to ceramics: Effects of aminopropyltriethoxysilane and temperature and humidity exposure on adhesion, <i>J. Adhesion Sci. Technol.</i> , Vol. 5, No. 4, pp. 333-343 (1991) 12/91 |
| ✓ | Cruse, R. W., et al., Effect of Polysulfidic Silane Sulfur on Rolling Resistance, <i>Rubber & Plastic News</i> , pp. 14-17 (April 21, 1997) |
| ✓ | Henriksen, P.N., et al. Inelastic electron tunneling spectroscopic studies of alkoxyxilanes adsorbed on alumina, <i>J. Adhesion Sci. Technol.</i> , Vol. 5, No. 4, pp.321-331 (1991) 12/91 |
| ✓ | Homstrom, S.E., et al., Paint Adhesion and Corrosion Performance of Chromium-Free Pretreatment of 55% Al-Zn-coated Steel, <i>J. Adhesion Sci. Technol.</i> Vol. 10, No. 9, pps. 883-904 (1996) 12/96 |
| ✓ | Homstrom, S.E., et al., Characterization of Thin Films of Organofunctional and Non-Functional Silanes on 55Al-43, 4Zn-1.6Si Alloy Coated Steel, <i>ECASIA 97</i> , pp. 987-990 (1997) - 12/97 |

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|-------------|-----------------|----------|-------------------|-------|-----------|
| SK | 4 2 1 0 4 5 9 | 07/01/80 | Williams et al. | | |
| | 4 2 3 1 9 1 0 | 11/04/80 | Plueddemann | | |
| | 4 2 4 3 7 1 8 | 01/06/81 | Murai et al. | | |
| | 4 3 1 5 9 7 0 | 02/16/82 | McGee | | |
| | 4 4 0 1 5 0 0 | 08/30/83 | Hamada et al. | | |
| | 4 4 0 9 2 6 6 | 10/11/83 | Wieczorrek et al. | | |
| | 4 4 4 1 9 4 6 | 04/10/84 | Sharma | | |
| | 4 4 5 7 9 7 0 | 07/03/84 | Das et al. | | |
| | 4 4 6 1 8 6 7 | 07/24/84 | Surprenant | | |
| | 4 4 8 9 1 9 1 | 12/18/84 | Chung, deceased | | |
| | 4 5 3 4 8 1 5 | 08/13/85 | Hamada et al. | | |
| | 4 6 1 8 3 8 9 | 10/21/86 | Agodoa | | |
| SH | 4 6 8 1 6 3 6 | 07/21/87 | Saito et al. | | |

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| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS |
|----------------------|----------|---------|-------|-----------|
| SK ✓ 3 4 4 3 9 2 6A1 | 06/12/86 | Germany | | |
| ✓ 53 3 0 7 6 | 02/02/78 | Japan | | |
| ✓ 56 1 6 1 4 7 5 | 12/11/81 | Japan | | |
| ✓ 58 5 2 0 3 6 | 11/19/81 | Japan | | |
| ✓ 60 2 0 8 4 8 0 | 10/21/85 | Japan | | |
| ca ✓ 60 8 1 2 5 6 | 05/09/85 | Japan | | |

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| SK ✓ | Luginsland, H. D., Reactivity of the Sulfur Functions of the Disulfane Silane TESP and the Tetrasulfane Silane TESPT, presented at a meeting of the Rubber Division, American Chemical Society, Chicago, Illinois (April 13-16, 1999) |
| ✓ | Plueddemann, Edwin P., Silane primers for epoxy adhesives, <i>J. Adhesion Sci. Technol.</i> , Vol. 2, No. 3, pp. 179-188 (1988) 12/88 |
| ✓ | Plueddemann, Edwin P., Reminiscing on Silane Coupling Agents, <i>J. Adhesion Sci. Technol.</i> Vol. 5, No. 4, pp. 261-277 (1991) 12/91 |
| SK ✓ | Plueddemann, Edwin P., et al. Adhesion Enhancing Additives for Silane Coupling Agents, 42nd Annual Conference, Composites Institute, The Society of the Plastics Industry, Inc., (February 2-6, 1987) |

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|----------------|-----------------|----------|-----------------|-------|--------------|
| 9 | 4 7 1 9 2 6 2 | 01/12/88 | Plueddemann | | |
| | 4 8 6 3 7 9 4 | 09/05/89 | Fujii et al. | | |
| | 5 0 5 1 1 2 9 | 09/24/91 | Cuthbert et al. | | |
| | 5 0 7 3 1 9 5 | 12/17/91 | Cuthbert et al. | | |
| | 5 0 7 3 4 5 6 | 12/17/91 | Palladino | | |
| | 5 1 0 8 7 9 3 | 04/28/92 | van Ooij et al. | | |
| | 5 2 0 3 9 7 5 | 04/20/93 | Richardson | | |
| | 5 2 1 7 7 5 1 | 06/08/93 | King et al. | | |
| | 5 2 2 1 3 7 1 | 06/22/93 | Miller | | |
| 2 | 5 2 9 2 5 4 9 | 03/08/94 | van Ooij et al. | | |

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|-----------------|----------|---------|-------|--------------|
| 60 2 1 3 9 0 2 | 10/25/85 | Japan | | |
| 62 7 5 3 8 | 01/14/87 | Japan | | |
| 62 5 7 4 7 0 | 03/13/87 | Japan | | |
| 63 3 4 7 9 3 | 07/12/88 | Japan | | |
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| 2 | ✓ | Sabata, A. Et al., TOFSIMS Studies of Cleaning Procedures and Silane Surface Treatments of Steels, <i>Journal of Testing and Evaluation</i> , JTRVA, Vol. 23, No. 2, pp. 119-125 (March 1995) |

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|----------------|-----------------|----------|----------------------|-------|--------------|
| SR | 5 3 2 2 7 1 3 | 06/21/94 | van Ooij et al. | | |
| | 5 3 2 6 5 9 4 | 07/05/94 | Sabata et al. | | |
| | R E 3 4 6 7 5 | 07/26/94 | Plueddemann deceased | | |
| | 5 3 6 3 9 9 4 | 11/15/94 | Angeline | | |
| | 5 3 8 9 4 0 5 | 02/14/95 | Purnell et al. | | |
| | 5 3 9 3 3 5 3 | 02/28/95 | Bishop | | |
| | 5 4 0 5 9 8 5 | 04/11/95 | Parker et al. | | |
| | 5 4 1 2 0 1 1 | 05/02/95 | Morris et al. | | |
| | 5 4 3 3 9 7 6 | 07/18/95 | van Ooij et al. | | |
| | 5 4 5 5 0 8 0 | 10/03/95 | van Ooij et al. | | |
| | 5 4 6 6 8 4 8 | 11/14/95 | Childress | | |
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| GA | 5 3 3 2 7 5 | 05/19/93 | Japan | | |
| I | 6 1 8 4 7 9 2 | 07/05/94 | Japan | | |
| | WO 98 3 0 7 3 5 | 07/16/98 | PCT | | |
| | WO 99 2 0 6 8 2 | 04/29/99 | PCT | | |
| | WO 99 2 0 7 0 -5 | 04/29/99 | PCT | | |

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| | ✓ | van Ooij, W. J., et al. Novel Silane-Based Pretreatments of Metals to Replace Chromate and Phosphate Treatment, <i>2nd Annual Advanced Techniques for Replacing Chromium: An Information Exchange</i> , prepared by David S. Vizlay, Concurrent Technologies Corp. NDCEE, Seven Springs Mountain Resort, Champion, PA (November 7-8, 1995) pp. 287-310 |
| GA | ✓ | van Ooij, W. J., et al. On the Use, Characterization and Performance of Silane Coupling Agents Between Organic Coatings and Metallic or Ceramic Substrates, <i>American Institute of Physics</i> , pp. 305-321 (1996) 12/96 |
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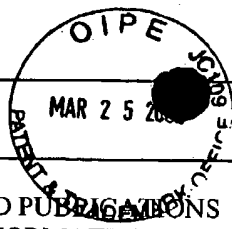
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|----------------|-----------------|----------|----------------------|-------|--------------|
| 8 | 5 5 2 0 7 6 8 | 05/28/96 | Crook et al. | | |
| | 5 6 0 3 8 1 8 | 02/18/97 | Brent et al. | | |
| | 5 6 2 2 7 8 2 | 04/22/97 | Poutasse, III et al. | | |
| | 5 6 6 0 8 8 4 | 08/26/97 | Crook et al. | | |
| | 5 6 3 3 0 3 8 | 05/27/97 | Ruschau | | |
| | 5 6 3 9 5 5 5 | 06/17/97 | Bishop | | |
| | 5 7 0 0 5 2 3 | 12/23/97 | Petrole et al. | | |
| | 5 7 5 0 1 9 7 | 05/12/98 | van Ooij et al. | | |
| | 5 7 5 9 6 2 9 | 06/02/98 | van Ooij et al. | | |
| | 5 7 8 9 0 8 0 | 08/04/98 | Grimberg et al. | | |
| | 5 8 5 1 3 7 1 | 12/22/98 | Steinbrecher et al. | | |
| 9 | 5 9 0 7 0 1 5 | 05/25/99 | Sexsmith | | |

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| WO 00 3 8 8 4 4 | 6 July 2000 | PCT | | |

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| ✓ | van Ooij, W. J., et al., Pretreatment of Metals for Painting by Organofunctional Silanes, Extended Abstract of Paper Presented at 1997 International Symposium on Advances in Corrosion Protection by Organic Coatings, Noda, Japan (October 29-31, 1997) |
| ⊗ | van Ooij, W. J., et al., Rubber to Metal Bonding, Presented at the International Conference on Rubbers, Calcutta, India (December 12-14, 1997) |
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| 4 | 6 0 5 7 0 4 0 | 05/02/00 | Hage | | |
| | 6 0 7 1 5 6 6 | 06/06/00 | Brown et al. | | |
| 8 | 6 1 3 2 8 0 8 | 10/17/00 | Brown et al. | | |

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| 9 | Abstract of Japanese patent number 62-79732 (10/04/94) |
| | Abstract of Japanese patent number 41-6174 (04/08/92) |
| | Abstract of Japanese patent number 62-216727 (09/24/87) |
| | Abstract of Japanese patent number 40-46932 (02/17/92) |
| | Comyn, J., et al., An examination of the interaction of silanes containing carbon-carbon double bonds with aluminum oxide by inelastic electron tunneling spectroscopy, <i>Int. J. Adhesion</i> (1990), 10(1), 13-18 (abstract only) |
| | Kurth, D.G., et al., Monomolecular layers and thin films of silane coupling agents by vapor-phase adsorption on oxidized aluminum, <i>J. Phys. Chem</i> (1992), 96(16), 6707-12 (abstract only) |
| | van Ooij, W. J., Silane-based Metal Pretreatments to Replace Phosphates and Chromates; copy of overhead slides presented at the 3rd Annual Advanced Techniques for Replacing Chromium: An Information Exchange and Technology Demonstration, November 4-6, 1996 |
| | Abstract of Japanese patent number 59-185779 (10/22/84) |
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| 8 | Abstract of Japanese patent number 53-232 (01/05/78) |
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